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EXAMINER	
TON, ANTHONY T	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/728,192	OGIER, RICHARD G.	
	Examiner	Art Unit	
	Anthony T Ton	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

PHIRIN SAM
PRIMARY EXAMINER

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTIONS

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claim 11-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Vu* (US Patent No. **5,056,085**) in view of *Mahany et al.* (US Patent No. **5,657,317**) hereinafter referred to as *Mahany.*

a) **In Regarding to Claim 11**: *Vu* disclosed a method of operating a network having a plurality of nodes, comprising:

maintaining in a receiving node a neighbor table comprised of each known neighbor node of the receiving node and the communication status of each known neighbor node *(see col.8 lines 21-34)*;

receiving a message containing an address of a new sending node *(see col.5 lines 14-19)*;

transmitting a NEIGHBOR message that includes an address of the receiving node to said new sending node *(see col.3 lines 45-49 and col.8 lines 35-39)*;

receiving a NEIGHBOR ACK message from said new sending node *(see col.7 lines 6-10, and col.5 lines 41-44: Due to their brevity, Ack Scout packets may be piggybacked and redundantly transmitted for added reliability (hence, the receiving node would receive a NEIGHBOR ACK message from said new sending node))*; and

updating said neighbor table to reflect discovery of said new sending node and communication status of said new sending node *(see col.2 lines 53-59, col.3 lines 22-26, col.4 lines 25-30, and col.8 lines 42-51).*

Vu failed to explicitly disclose the message that is a HELLO message and the method comprising a step of transmitting at least one HELLO message comprising only a list of neighbor nodes that have communication status changes.

Mahany explicitly disclosed such a HELLO message and such a step of transmitting at least one HELLO message comprising only a list of neighbor nodes that have communication status changes *(see col.25 lines 27-34; and col.30 lines 37-39).*

At the time of the invention, it would be obvious to a person of ordinary skill in the art to implement such a HELLO message and such a step of transmitting at least one HELLO message comprising only a list of neighbor nodes that have communication status changes, as taught by *Mahany* with *Vu,* so that a list of active neighbor nodes in communications networks can be maintained properly. The motivation for doing so would have been to handle additional traffic and bandwidth utilization in a communications network *(see Mahany col.29 lines 36-46).* Therefore, it would have been obvious to combine *Mahany* with *Vu* in the invention as specified in the claim.

b) **In Regarding to Claim 12**: *Vu* further disclosed each of said at least one HELLO message includes the address of the receiving node, wherein neighbor nodes in the heard status have been heard by the receiving node but have not been determined to have heard a previous HELLO message from the receiving node *(see col.5 lines 24-28).*

Vu failed to explicitly disclose each of said at least one HELLO message includes a list of neighbor nodes that have their communication status changed to a heard status.

Mahany explicitly disclosed such an each of said at least one HELLO message includes a list of neighbor nodes that have their communication status changed to a heard status *(see col.25 lines 27-34).*

At the time of the invention, it would be obvious to a person of ordinary skill in the art to implement such an each of said at least one HELLO message includes a list of neighbor nodes that have their communication status changed to a heard status, as taught by *Mahany* with *Vu,* so that a list of active neighbor nodes in communications networks can be maintained properly. The motivation for doing so would have been to reduce overhead bandwidth in a communications network. Therefore, it would have been obvious to combine *Mahany* with *Vu* in the invention as specified in the claim.

c) **In Regarding to Claim 13**: *Vu* further disclosed each of said at least one HELLO message includes the address of the receiving node, wherein neighbor nodes have been heard by the receiving node and have been determined to have heard a previous HELLO message from the receiving node *(see col.5 lines 24-26 and col.4 lines 15-30).*

Vu failed to explicitly disclose each of said at least one HELLO message includes a list of neighbor nodes that have their communication status changed to a symmetric status.

Mahany explicitly disclosed such an each of said at least one HELLO message includes a list of neighbor nodes that have their communication status changed to a symmetric status, and wherein neighbor nodes in the symmetric status have been heard by the receiving node *(see*

col.25 lines 27-34, and col.38 lines 16-28: handshake between the computing terminal and other network device (hence symmetric status)).

At the time of the invention, it would be obvious to a person of ordinary skill in the art to implement such an each of said at least one HELLO message includes a list of neighbor nodes that have their communication status changed to a symmetric status, and wherein neighbor nodes in the symmetric status have been heard by the receiving node, as taught by *Mahany* with *Vu,* so that a list of active neighbor nodes in communications networks can be maintained properly. The motivation for doing so would have been to reduce overhead bandwidth in a communications network. Therefore, it would have been obvious to combine *Mahany* with *Vu* in the invention as specified in the claim.

d) **In Regarding to Claim 14**: The claimed subject matters of this claim are similar to that of the claim 13, **except for** a list of neighbor nodes that have their communication status changed to a lost status, and wherein a neighbor node is determined to be in the lost status when a HELLO message containing the address of that neighbor node has not been heard by the receiving node in a predetermined period of time. However, *Vu* also explicitly disclosed such an exception *(see col.5 lines 29-34: designated Ack Scout Timer (hence, a predetermined period of time), and lines 48-57: enter Null for those neighbor nodes from which has not been received an Ack Scout packet (hence, loosen nodes)).*

e) **In Regarding to Claim 15**: *Vu* further disclosed the predetermined period of time corresponds to a HELLO-INTERVAL period multiplied by a predetermined number K *(see col.8 lines 10-42: periodically designating one of the data packets as a scout packet for establishing broadcast routes to the receiving nodes; initiating a first time interval having a*

predetermined duration for receipt of acknowledgements of receipt of the scout packets; and initiating a second time interval having a predetermined duration for receipt of acknowledgements of receipt of the scout packets by the other receiving nodes (hence a predetermined period of time corresponds to a Hello-interval period multiplied by a predetermined number K, in this case K = 2 since two time intervals)).

f) **In Regarding to Claim 16**: *Vu* further disclosed the method further comprising subsequently transmitting at least one HELLO message containing the address of the receiving node but not the address of a neighbor node that was previously in the list of neighbor nodes in the lost state *(see col.4 lines 15-18; col.5 lines 48-57; and col.6 lines 17-27).*

g) **In Regarding to Claim 17**: *Vu* further disclosed the method further comprising subsequently transmitting at least one HELLO message containing a list of neighbor nodes in a lost status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a heard status *(see col.4 lines 15-18; and col.5 lines 48-57).*

h) **In Regarding to Claim 18**: *Vu* further disclosed the method further comprising subsequently transmitting at least one HELLO message containing a list of neighbor nodes in a lost status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a symmetric status *(see col.4 lines 15-18;, col.5 lines 48-57; and col.7 line 6-10).*

i) **In Regarding to Claim 19**: *Vu* further disclosed the method further comprising subsequently transmitting at least one HELLO message containing a list of neighbor nodes in a symmetric status, and wherein that list of neighbor nodes includes a neighbor node that was in a

previous list of neighbor nodes in a heard status *(see col.4 lines 15-30; col.7 lines 6-10; and col.5 line 50 - col.6 line 27).*

j) **In Regarding to Claims 20-28**: The claimed subject matters of these claims are the same as that of the claims 11-19, respectively. Therefore, the rejections on the claims 11-19 would also apply to these claims in a network as taught.

Response to Arguments

3. Applicant's arguments filed on 9/20/2004 for **claims 11-28** have been fully considered but they are not persuasive.

4. The Applicant argues that *Vu* and *Mahany* fail to disclose or suggest the novel invention of transmitting a HELLO message that comprises only a list of neighbor nodes that have status communication status changes as cited in the Applicant's independent claims 11 and 20.

Examiner respectfully disagrees to this argument because *Mahany* explicitly discloses such a HELLO message. In which, the HELLO message may also contain information regarding pending changes in a local area network (NET) *(see Mahany col.25 lines 27-28)*; in addition, the HELLO message also enables communication of information indicating to all devices that certain changes in the NET are required. Changes to the NET are communicated over the course of the change occurs, so that all devices are likely to be aware of changes and synchronize at the instant of change *(see Mahany col.30 lines 37-47).*

Based on these disclosures, *Mahany* has clearly disclosed the Applicant's novel HELLO message that comprises only a list of neighbor nodes that have status communication status changes.

Furthermore, *Mahany* explicitly disclosed a HELLO message that would be inserted as a broadcast message at the beginning of the session period as illustrated in Fig.8 *(see Mahany col.25 lines 19-26).*

Vu explicitly disclosed a scout packet that is transmitted in a constrained flood broadcast transmission. Therefore, *Mahany*'s HELLO message would be inserted into the scout packet of *Vu* because the HELLO message of *Mahany* would be inserted as a broadcast message as set forth above. For this advantage of the inserted HELLO message, a combination of *Mahany*'s HELLO message and *Vu's* scout packet should be successful to provide an optimal bandwidth use in a communications network.

Conclusion

5. For the reasons as set forth above, the pending claims 11-28 are unpatentable and being still rejected as the same old ground of the rejection as described above.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Examiner Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Anthony T Ton** whose telephone number is **571-272-3076**. The examiner can normally be reached on M-F: 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chau Nguyen** can be reached on **571-272-3126**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

by: _____
Anthony T. Ton
Patent Examiner
January 15, 2005

PHIRIN SAM
PRIMARY EXAMINER